

IN THE CLAIMS:

All claims currently pending and under consideration have been previously presented and are shown below. Claim 17 has been cancelled. All other claims read as previously presented.

Listing of Claims:

1-13. Canceled

14. (Currently amended) A kit for sequencing one or more DNA regions from a genomic DNA sample or a microorganism, said kit consisting of, in packaged combination, a single reaction vessel for each DNA region to be sequenced containing a mixture of region-specific sequencing reagents sufficient for sequencing the sense and anti-sense strand of each DNA region to be sequenced and optionally in said mixture one or more non-region specific sequencing reagents, wherein said region-specific sequencing reagents comprise region-specific sequencing primers comprising a ~~pair of primers~~ primer which specifically binds to the sense strand of said DNA region and a primer which specifically binds to the antisense strands strand of said DNA region, ~~and wherein said primers~~ flank one of the DNA regions within the genomic or microorganisms DNA, and wherein the primers specific for the sense strand are labeled with a first detectable label and the primers specific for the anti-sense strand are labeled with a second detectable label that is distinguishable from the first detectable label, and said optional non-region specific sequencing reagents are selected from one or more of the group consisting of deoxynucleotide triphosphate feedstocks, at least one chain terminating dideoxynucleotide triphosphate and a thermally stable polymerase enzyme capable of incorporating dideoxynucleotides into an extending nucleic acid polymer.

15. (Previously Presented) The kit of claim 14, wherein the kit is for sequencing one or more DNA regions from a genomic sample, and wherein the pair of primers bind to the sense and antisense strands of the genomic sample.

16. (Previously Presented) The kit of claim 14, wherein the kit is for sequencing one or more DNA regions from a selected microorganism and wherein the pair of primers bind to the sense and antisense strands of DNA from the microorganism.

17. (Canceled)

18. (Previously Presented) The kit of claim 17, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:50 to 1:1000.

19. (Previously Presented) The kit of claim 17, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:100 to 1:500.

20. (Previously Presented) The kit of claim 17, wherein the kit includes as a non-specific reagent a polymerase enzyme which incorporates dideoxynucleotides into an extending nucleic acid polymer at a rate which is no less than 0.4 times the rate of incorporation of deoxynucleotides.

21. (Previously Presented) The kit of claim 20, wherein the kit includes, as a region-specific reagent, a pair of primers which bind to the sense and antisense strands and flank one of the plurality of DNA regions within the genomic DNA.

22. (Previously Presented) The kit of claim 20, wherein the kit includes as non-region specific reagents four deoxynucleotide triphosphates and at least one dideoxynucleotide triphosphate.

23. (Previously Presented) The kit of claim 22, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:50 to 1:1000.

24. (Previously Presented) The kit of claim 22, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:100 to 1:500.

25. (Previously Presented) The kit of claim 14, wherein the kit contains a plurality of reaction vessels, each of which comprise said region-specific reagents for sequencing a DNA region.

26. (Canceled)

27. (Previously Presented) The kit of claim 25, wherein the kit is for sequencing one or more DNA regions from a genomic sample, and wherein the pair of primers bind to the sense and antisense strands of the genomic sample.

28. (Previously Presented) The kit of claim 25, wherein the kit is for sequencing one or more DNA regions from a selected microorganism and wherein the pair of primers bind to the sense and antisense strands of DNA from the microorganism.

29. (Previously Presented) The kit of claim 25, wherein the kit includes as non-region specific reagents four deoxynucleotide triphosphates and at least one dideoxynucleotide triphosphate.

30. (Previously Presented) The kit of claim 29, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:50 to 1:1000.

31. (Previously Presented) The kit of claim 29, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:100 to 1:500.

32. (Previously Presented) The kit of claim 29, wherein the kit includes as a non-specific reagent a polymerase enzyme which incorporates deoxynucleotides into an extending nucleic acid polymer at a rate which is no less than 0.4 times the rate of incorporation of deoxynucleotides.

33. (Previously Presented) The kit of claim 32, wherein the kit includes, as a region-specific reagent, a pair of primers which bind to the sense and antisense strands and flank one of the plurality of DNA regions within the genomic DNA.

34. (Previously Presented) The kit of claim 32, wherein the kit includes as non-region specific reagents four deoxynucleotide triphosphates and at least one dideoxynucleotide triphosphate.

35. (Previously Presented) The kit of claim 34, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:50 to 1:1000.

36. (Previously Presented) The kit of claim 34, wherein the dideoxynucleotide triphosphate is present in a mole ratio to the corresponding deoxynucleotide triphosphate of from 1:100 to 1:500.